

# Easy-Access Landscapes and Time Series

## The Protected Area Archive Tool



Coordinating Approaches for Utilizing Remote Sensing-Earth Observation Data

St Petersburg, Florida

1-3 March 2005



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# Presentation Overview

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- ❑ History
- ❑ Conservation user community
- ❑ Limited access for the non-RS-enabled
- ❑ Protected Area Archive
- ❑ Demonstration
- ❑ Availability and plans



*Gwaii Haanas National Park  
Canada*

# Protected Area Archive

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- ❑ Collections of images
- ❑ Packaged with simple tools to use them
- ❑ No RS skills or Internet connection needed



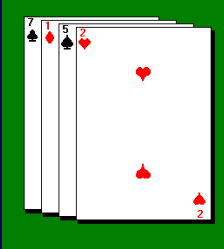
*Phu Kradung National Park,  
Thailand*



# History

- ❑ Leave of absence (Nov 01)
- ❑ Dinner with park managers (Laos, Jan 02)
- ❑ RS/GIS and conservation workshop (Bangkok, Oct 02)
- ❑ IUCN World Parks Congress (Sep 03)
- ❑ IUCN World Conservation Congress (Nov 04)

MY, VN...



World Parks Congress  
Durban

St Petersburg

Tools for Change

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# "Traditional" Conservation RS Users

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## **RS-enabled**

- **Do RS-based research and applications**
- **Limited by funding**

# "Potential" Conservation RS Users

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## 1. Not RS-enabled

- Expertise in conservation management
- Manage parks, vegetation, and animals
- Limited by access

## 2. RS-enabled

- Do RS-based research and applications
- Limited by funding

# Conservation Community Duality

## 1. Not RS-enabled

- Expertise in conservation management
- Manage parks, vegetation, and animals
- Limited by access

## 2. RS-enabled

- Do RS-based research and applications
- Limited by funding

**Non-Traditional  
Conservation  
Users**



**Traditional  
Conservation  
Users**





# Problem

**Data access and analysis systems  
are for experts**

**□ Result: underutilization**

- **Difficult to find appropriate data**
- **Using it requires**
  - **Technical expertise**
  - **Sophisticated tools**



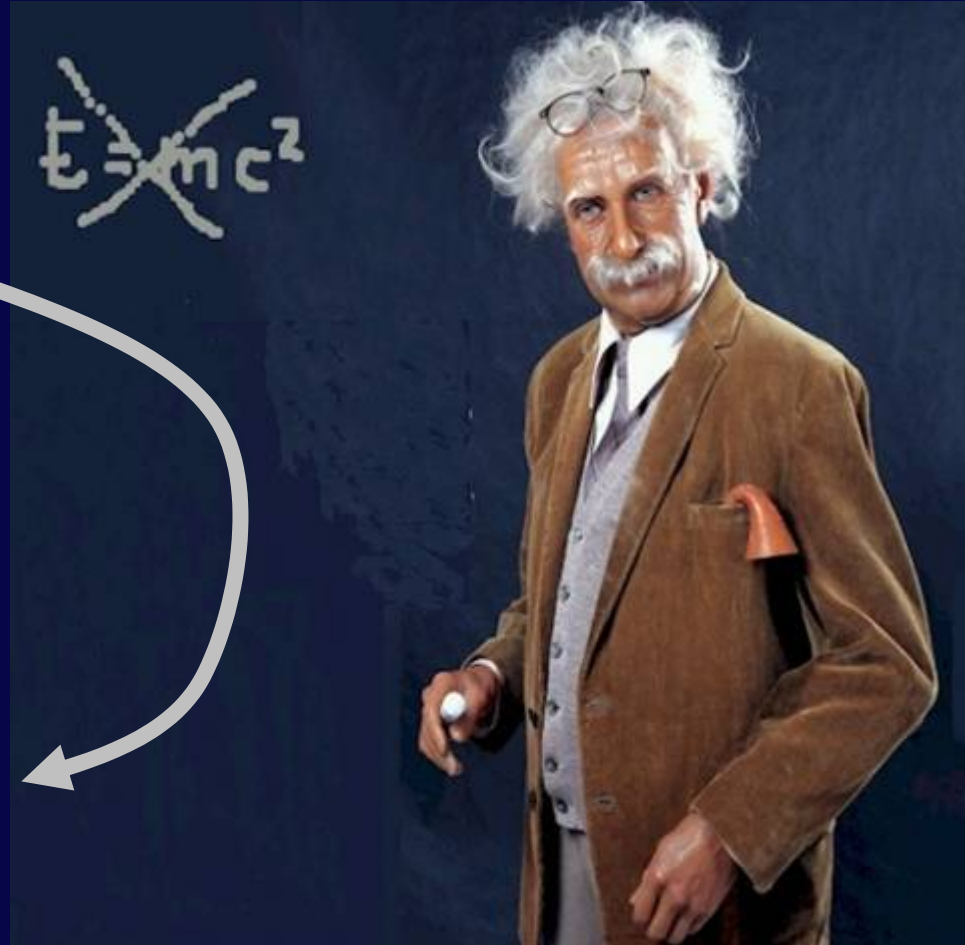
*Somewhere in eastern  
Australia*

# Solutions

Two solutions are possible:

1. Training
2. Make satellite data easier to
  - Obtain
  - Use

Protected Area  
Archive

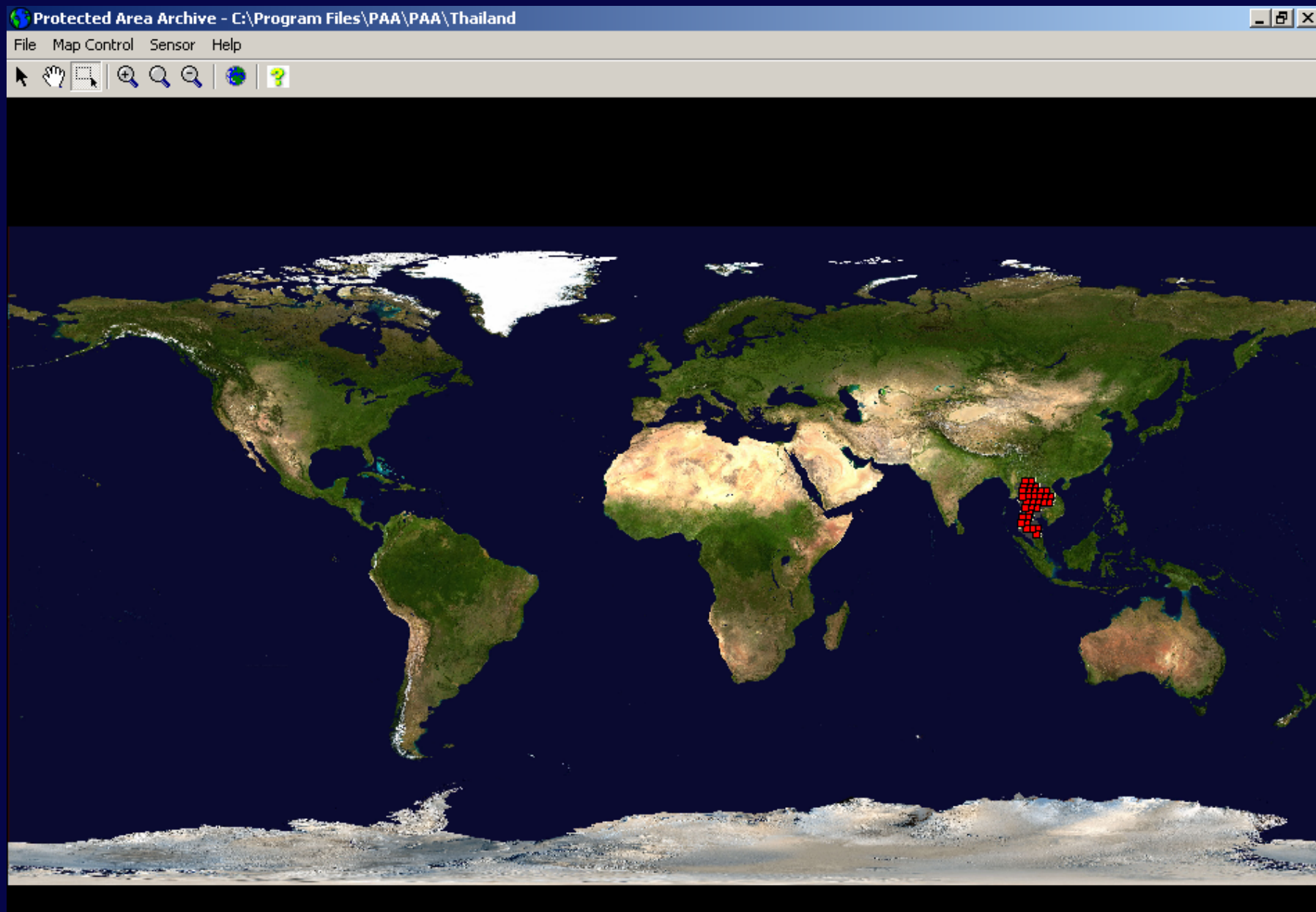


# Demonstration

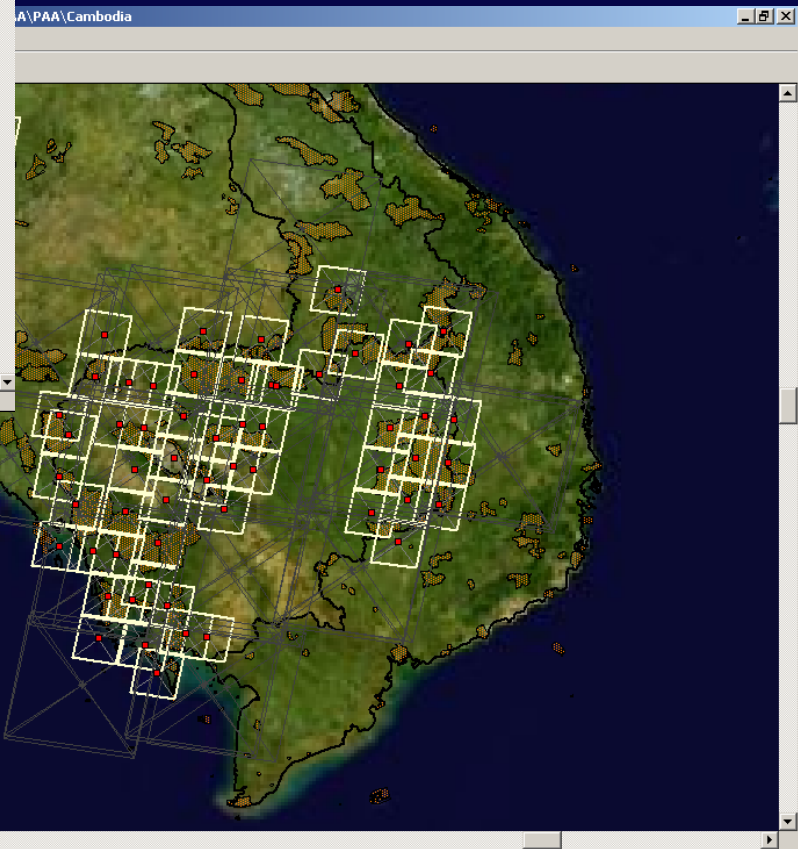
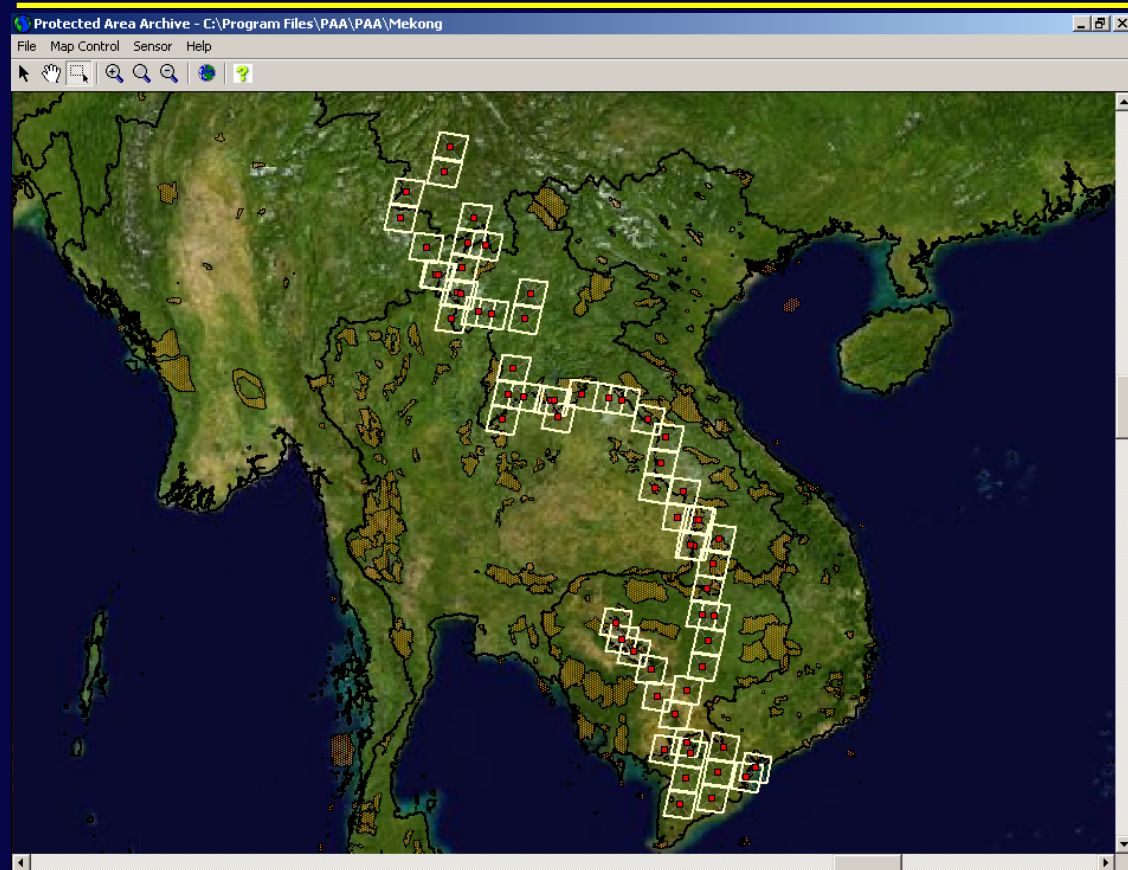




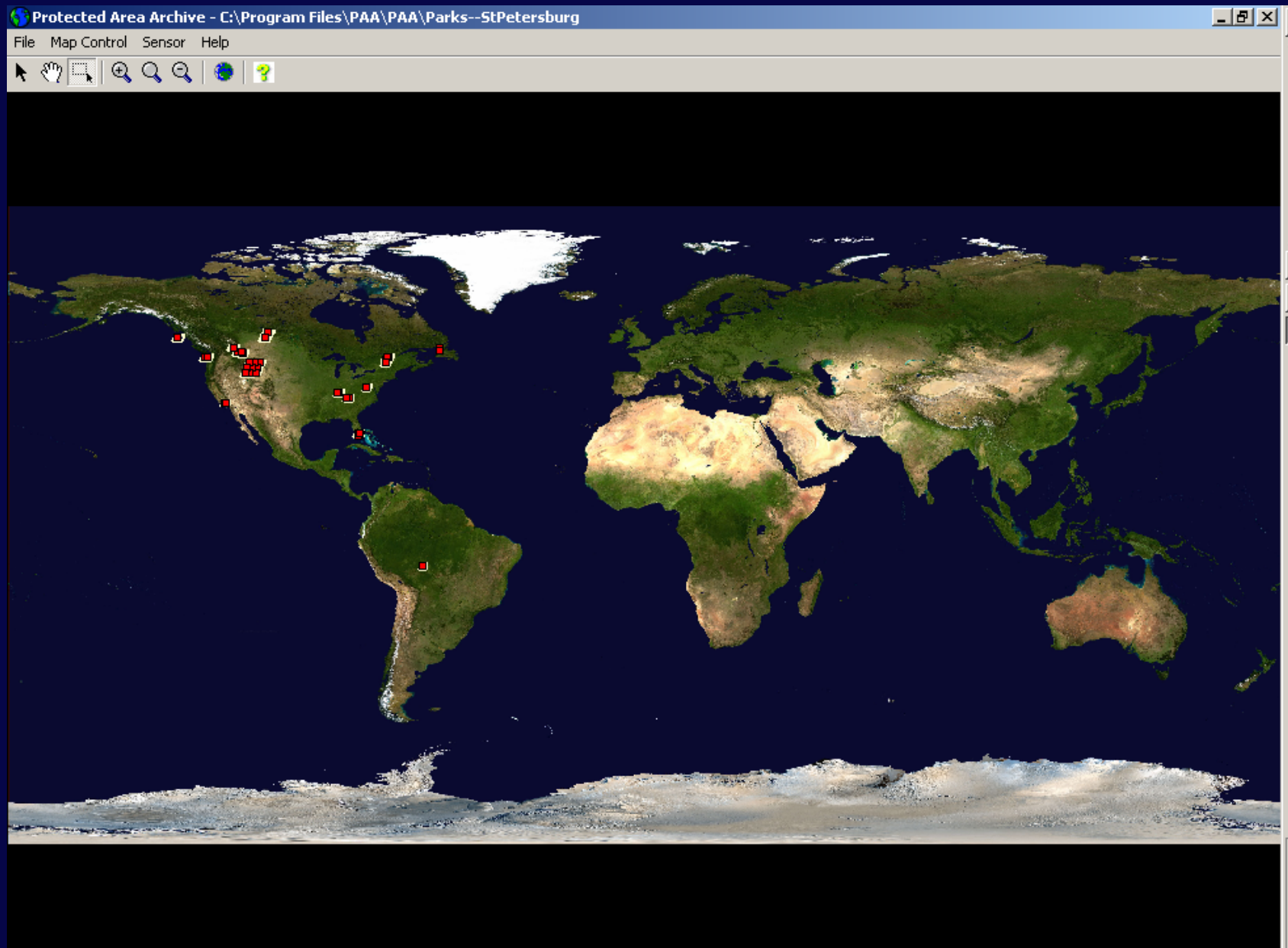
# Locator Map



# Collections

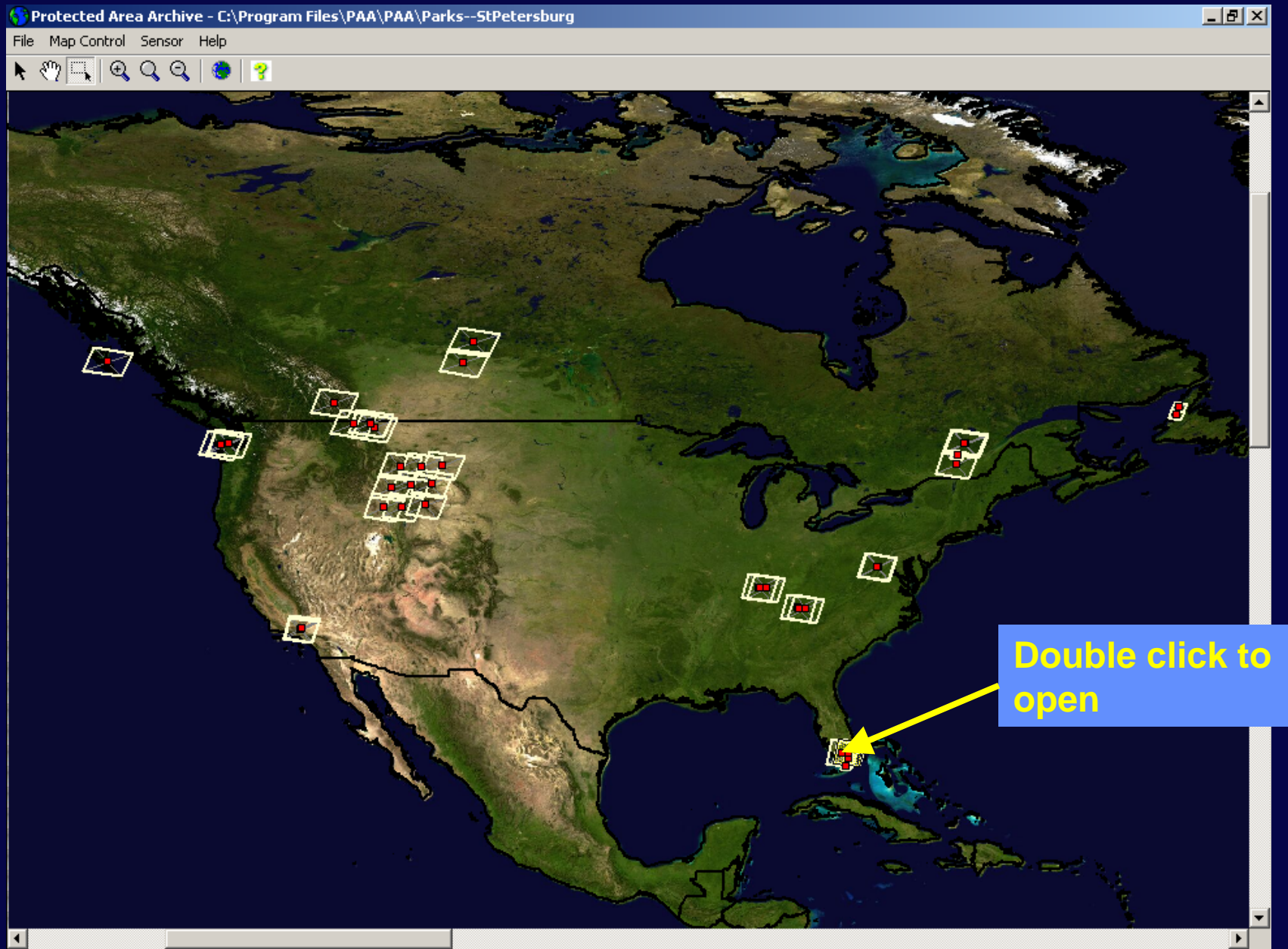


# Open Another Collection

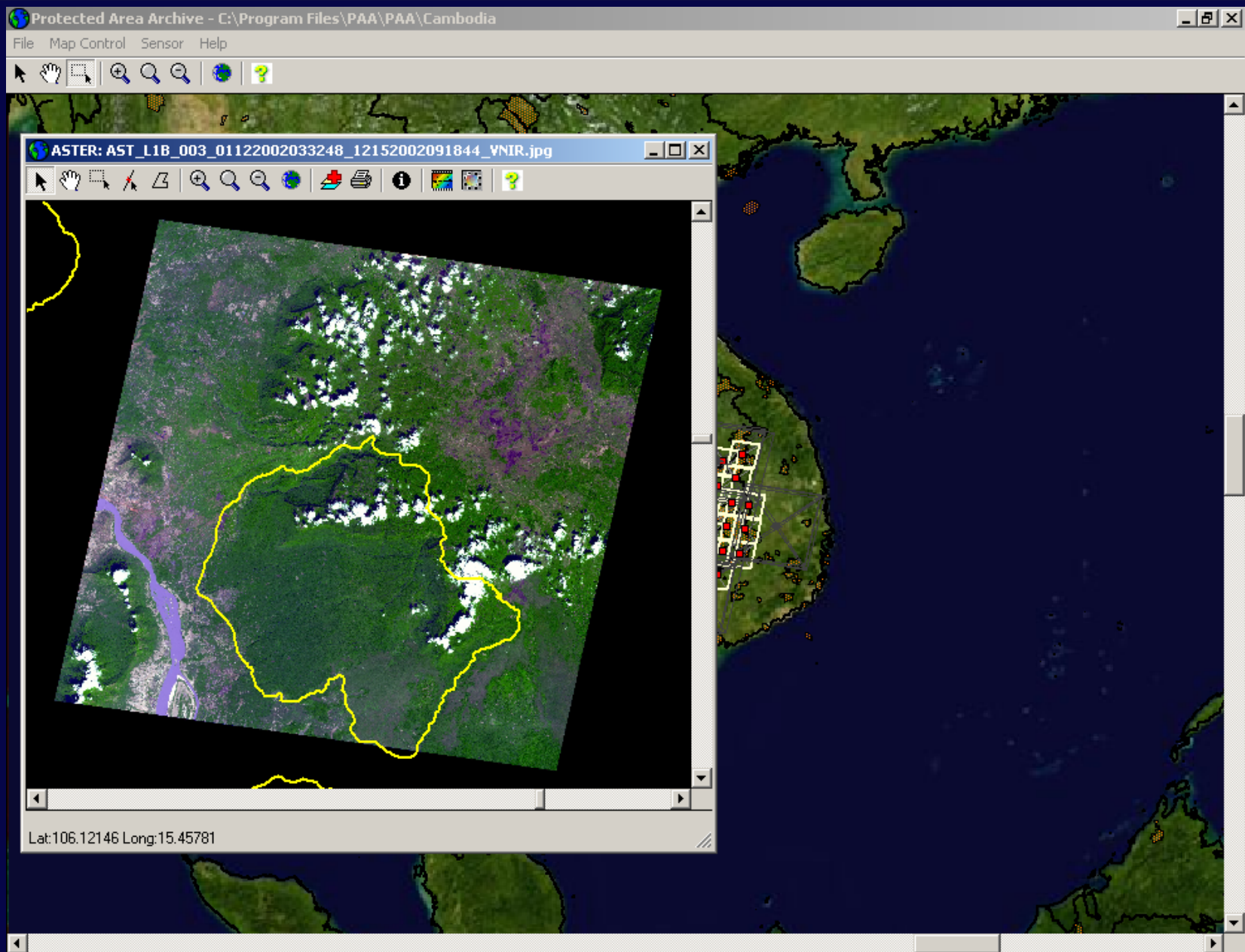




# Zoom to ROI

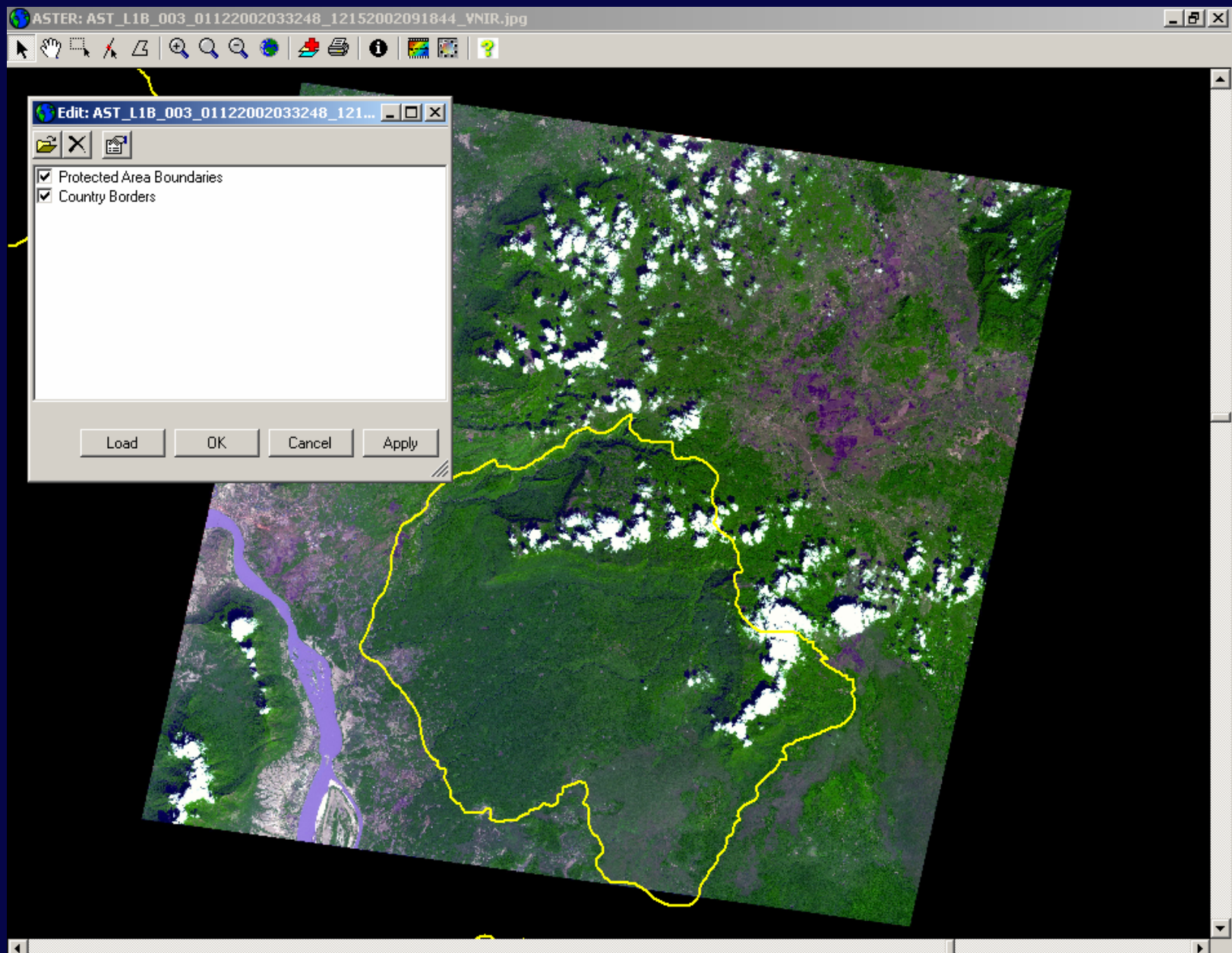


# Scene Displays



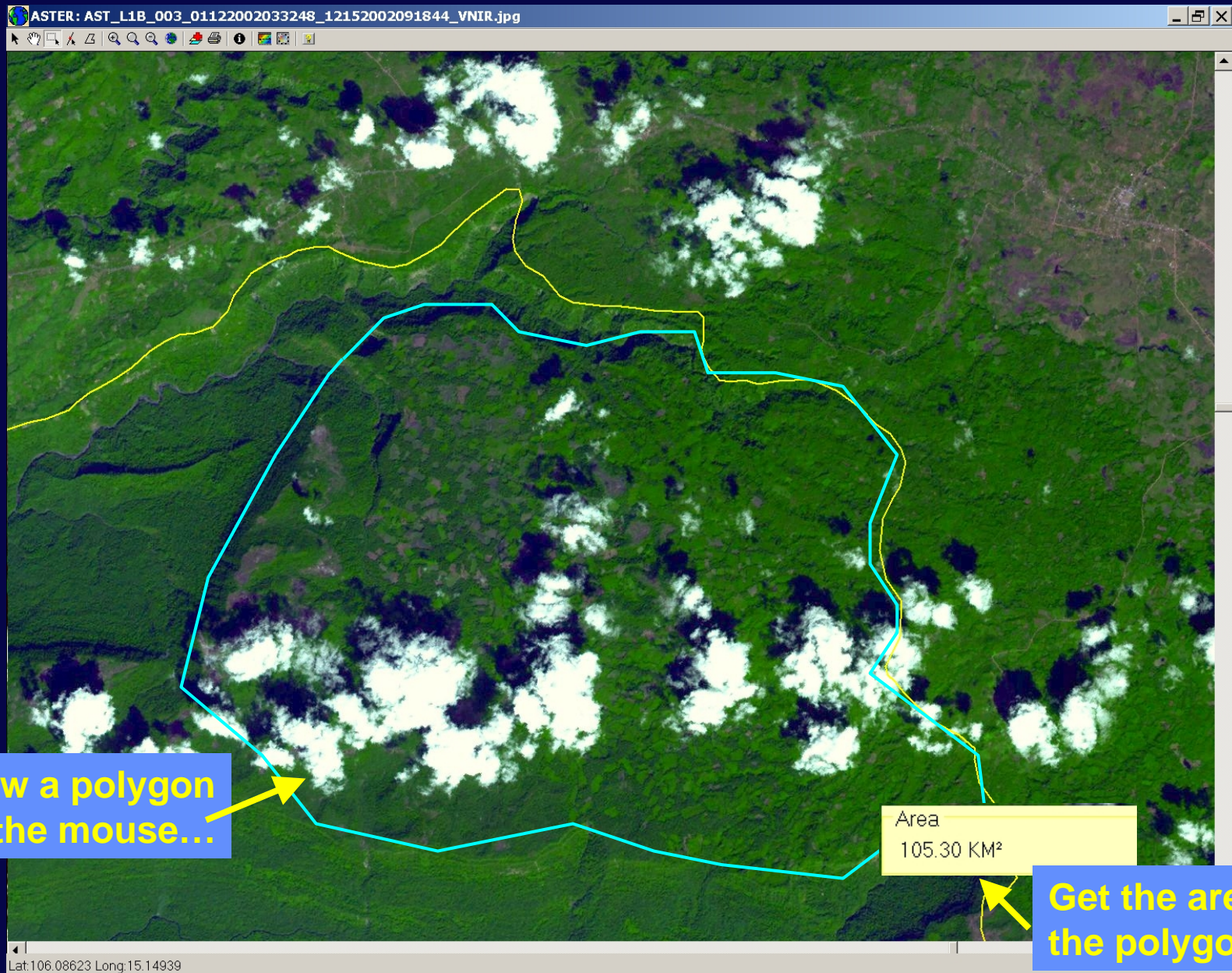


# Overlay Manager





# Measurement of Area and Distance

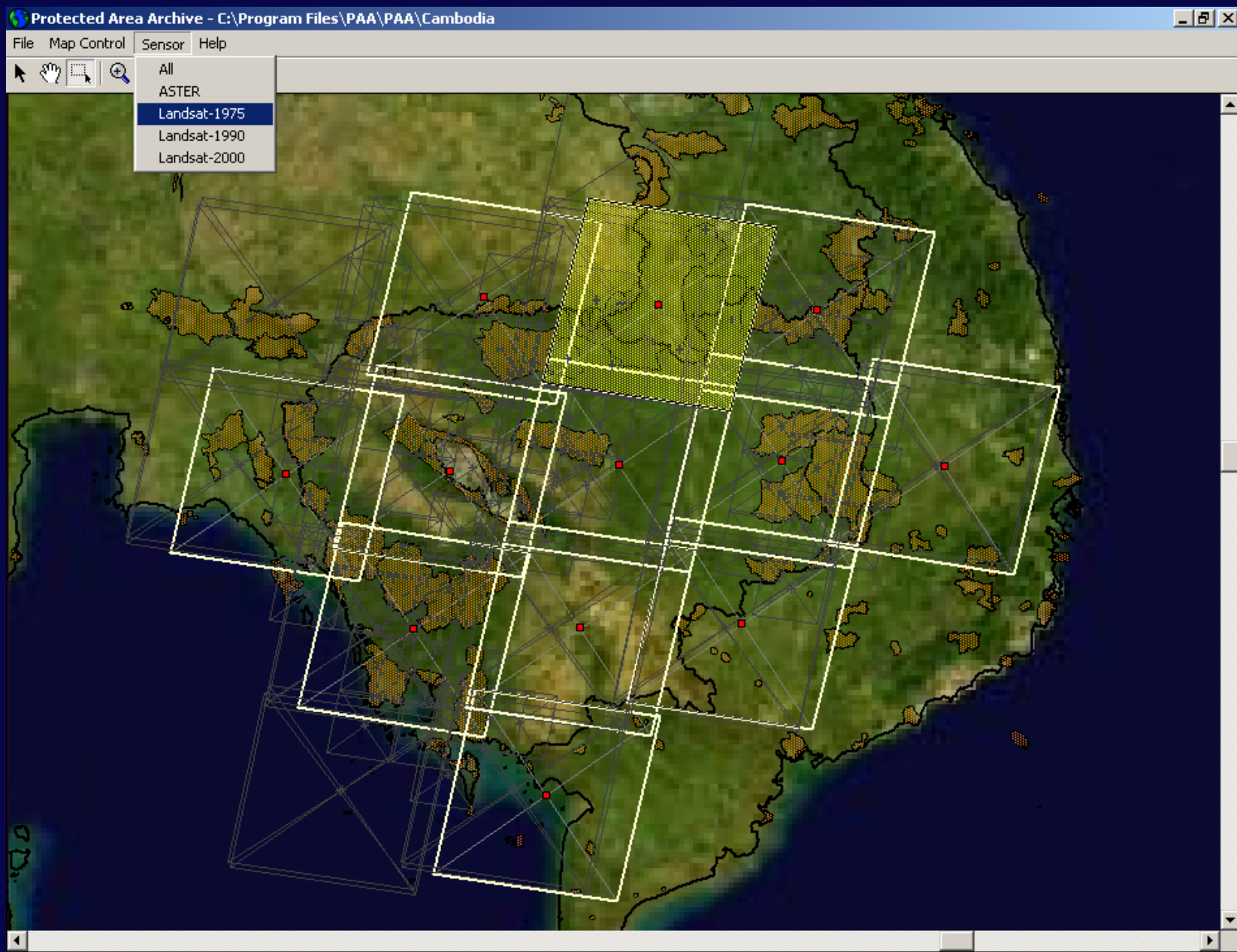


Draw a polygon  
using the mouse...

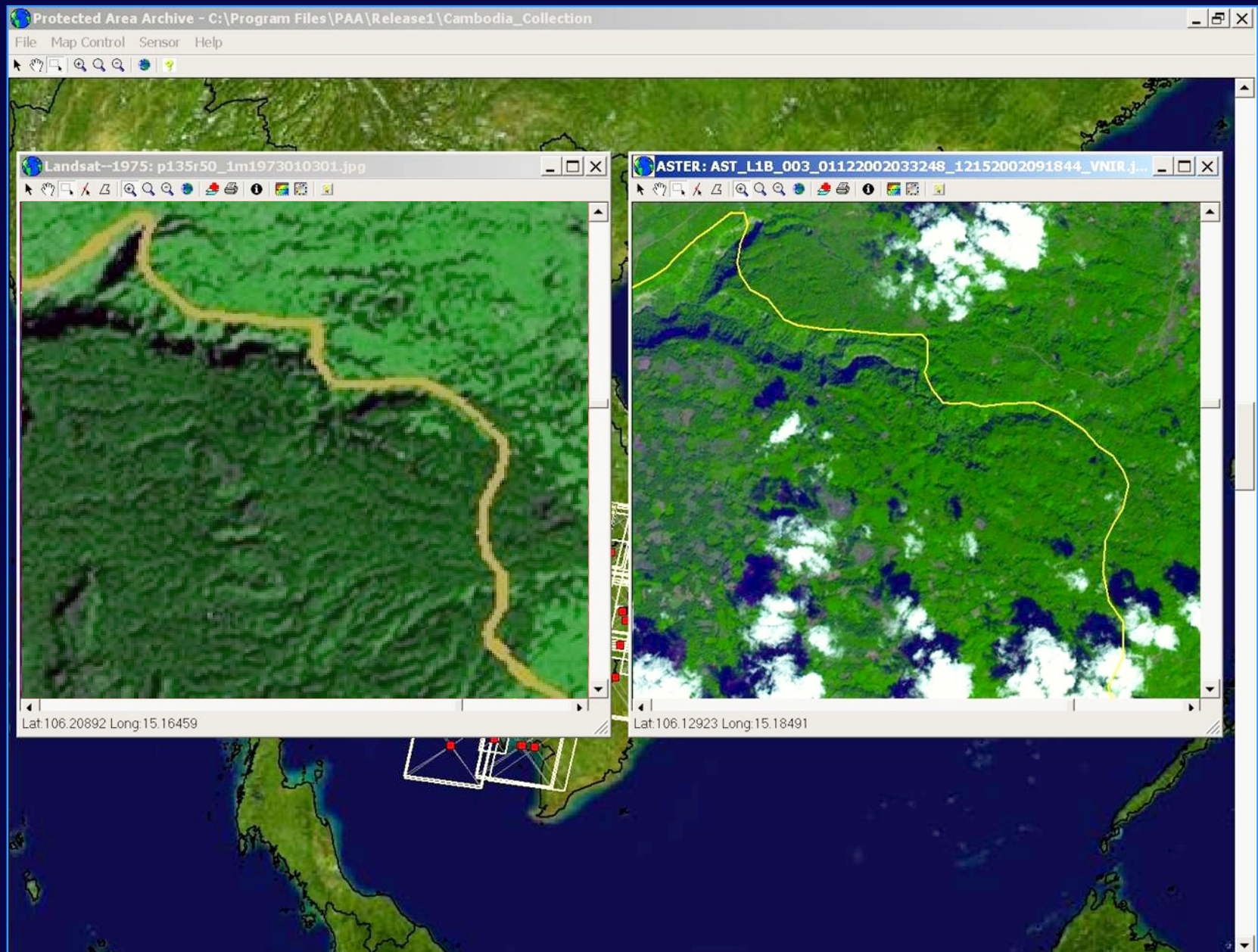
Get the area of  
the polygon



# Select Another Image Layer

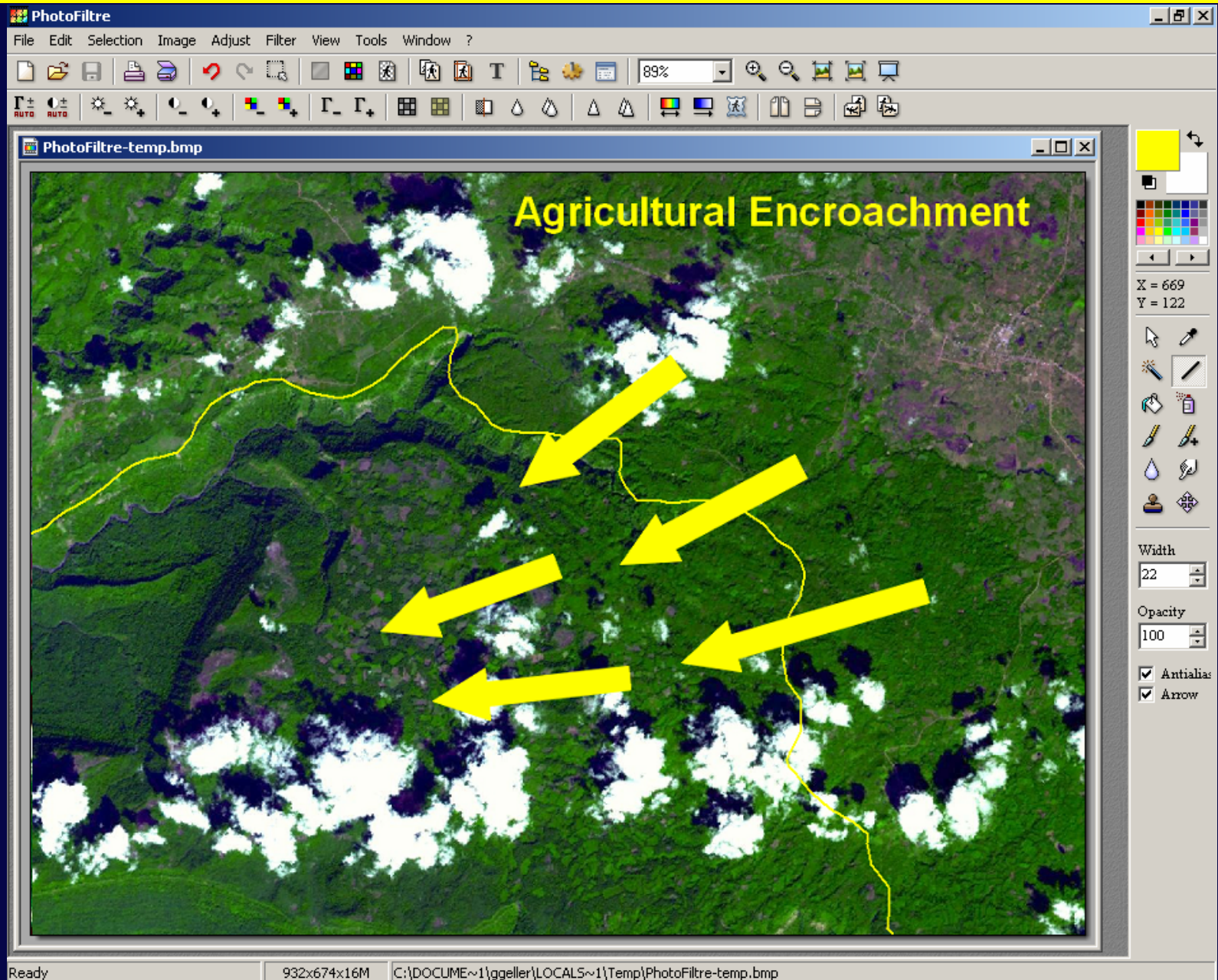


# Change Analysis



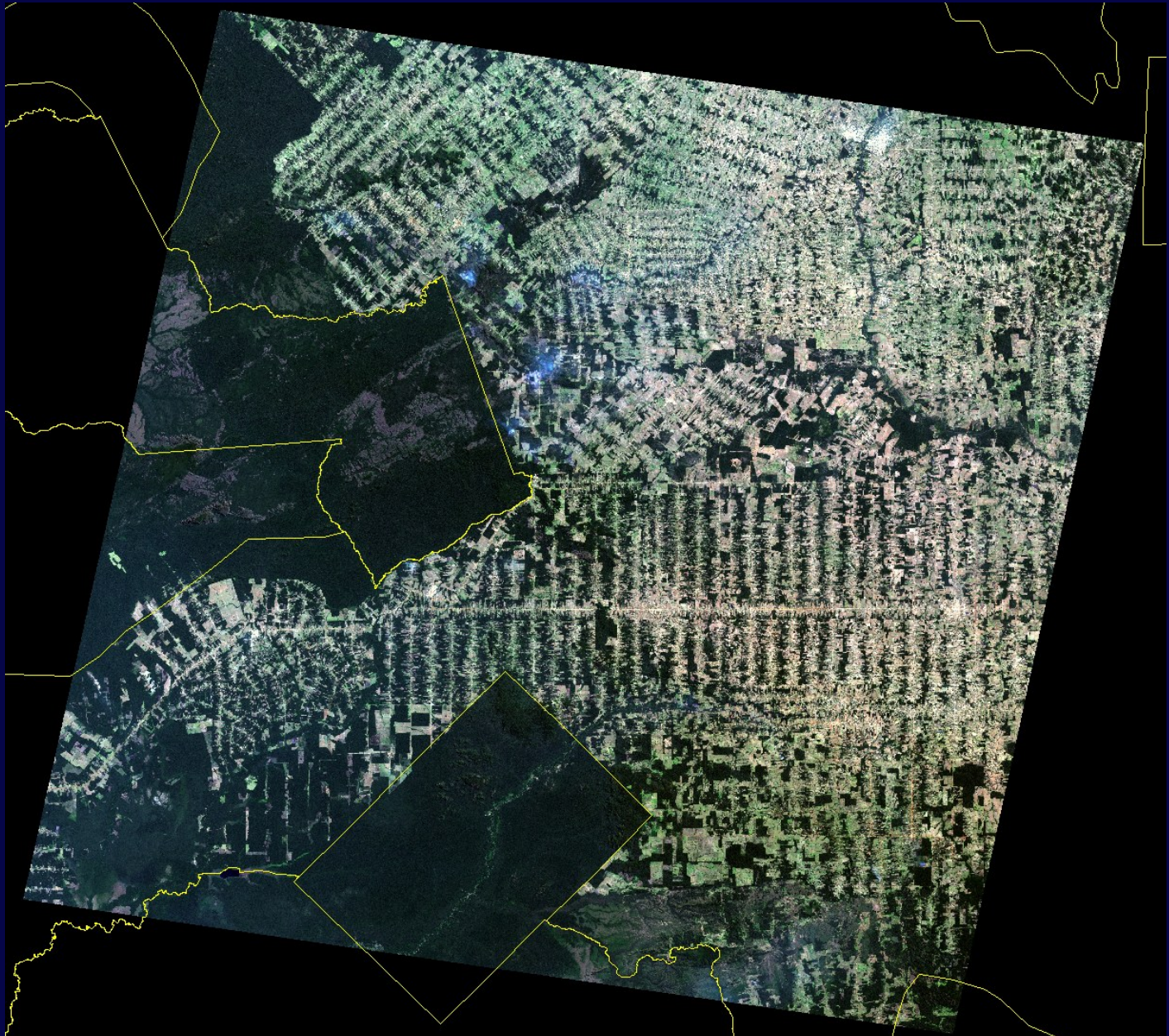


# Annotate Image



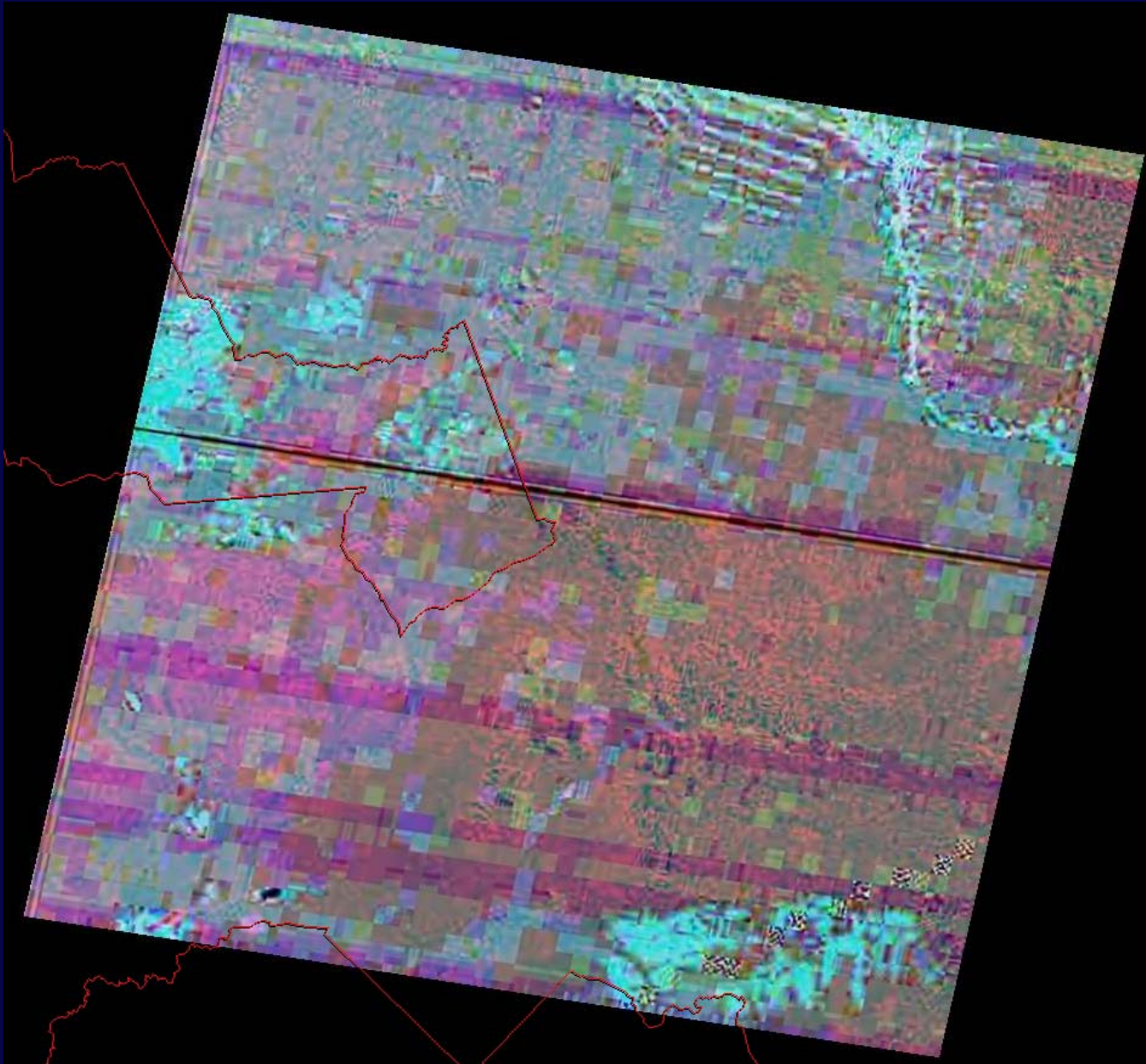


# Rondonia, Brazil, 2001



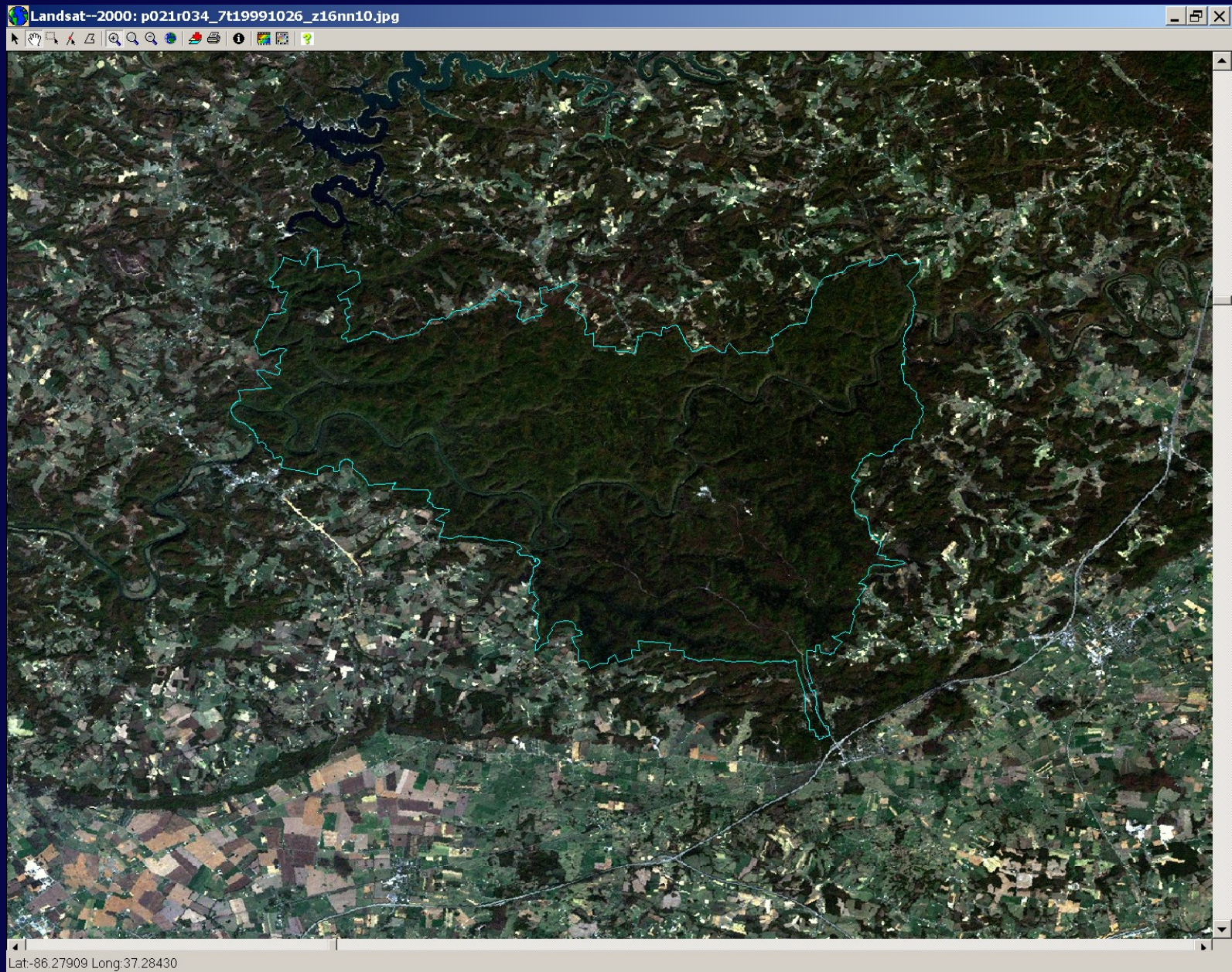


# Rondonia, Brazil, 1972



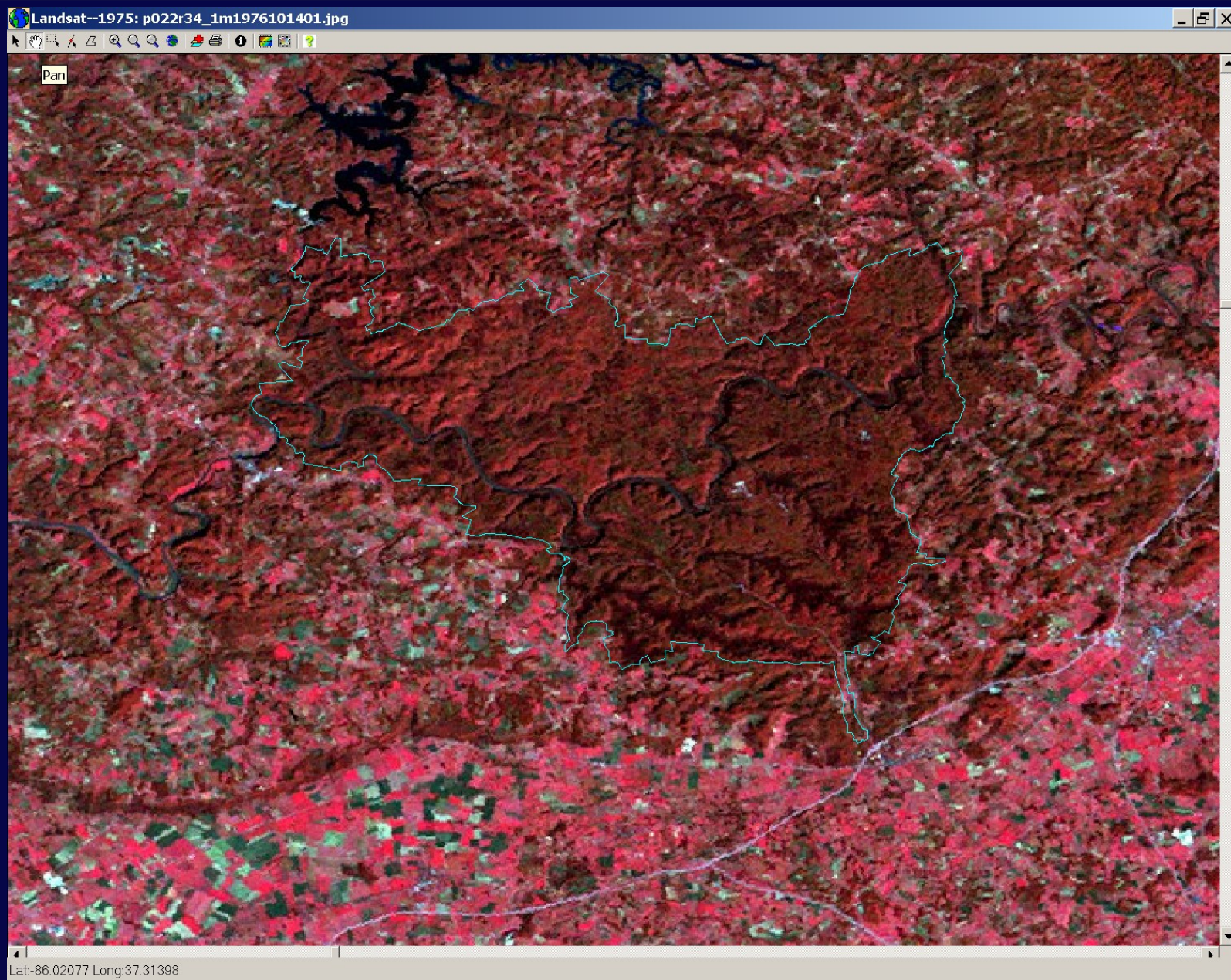


# Mammoth Cave 2000





# Mammoth Cave 1976





# Status of PAA

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- ❑ Version 1 completed in November
- ❑ Released at IUCN World Conservation Congress
- ❑ Working out plans for next release



*Gros Morne National Park  
Canada*

# Plans: More Capabilities

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- ☐ Change analysis tools
- ☐ Topographic layer, with draping capability
- ☐ More data layers (eg, MODIS)
- ☐ Web capabilities
- ☐ Plug-ins for specific tasks
- ☐ Beginner/Advanced modes



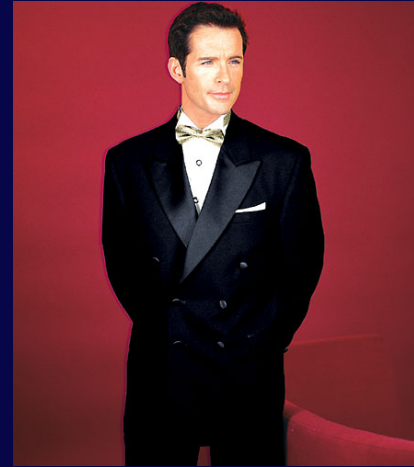
*Edgmont National Park  
New Zealand*



# Plans: Formal Operations

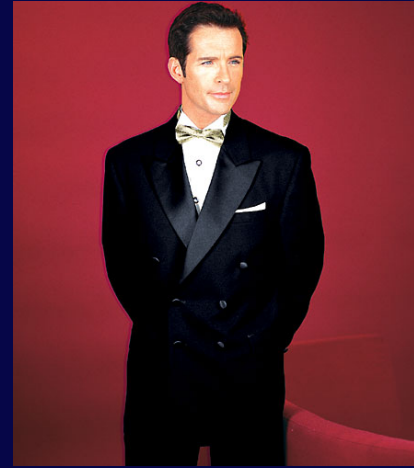
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- ☐ Permanent operational home needed
- ☐ Website for users to order collections
- ☐ Generate collection
- ☐ Deliver via ftp or media



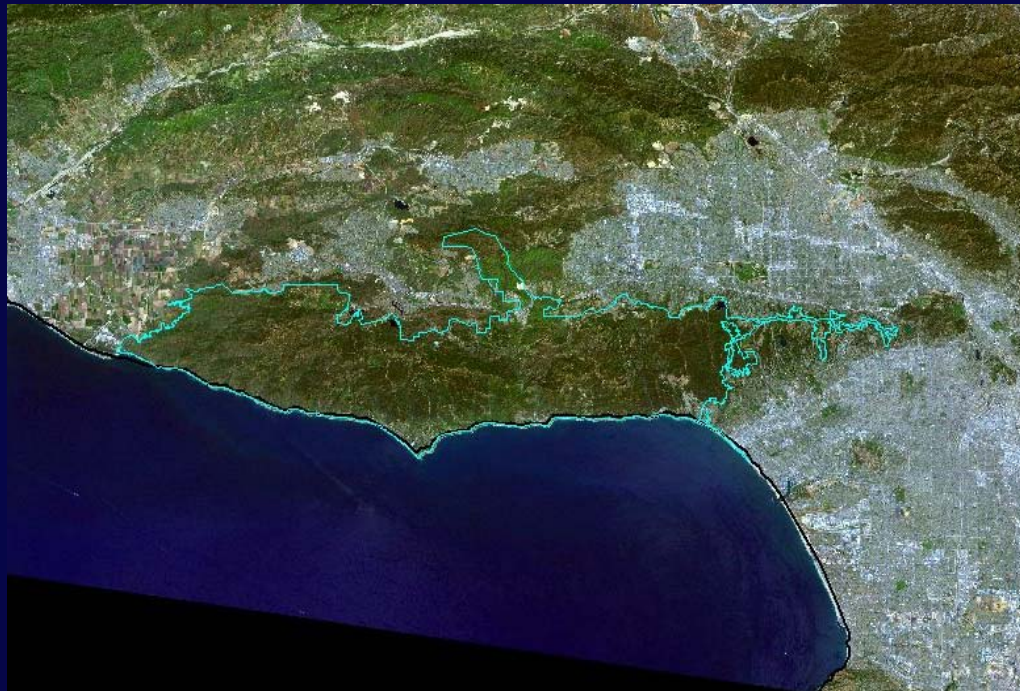
# Plans: Formal Operations

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# Plans: Open Source Version

- ☐ Eliminates bureaucratic constraints
- ☐ Leverages existing OS community
- ☐ Support for plug-ins
- ☐ Allows users to develop applications that support their specific needs



*Santa Monica Mountains  
National Recreation Area,  
USA*

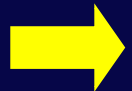
## [asterweb.jpl.nasa.gov/paa](http://asterweb.jpl.nasa.gov/paa)

### Also of interest...

- ☐ ASTER acquisition requests are actively solicited
- ☐ Monitoring loop concept
  - Baseline PAA
  - Periodic ASTER acquisitions



Questions





# Questions

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- ☐ Would something like PAA be of use to NPS/PCA?
- ☐ What tools/capabilities are needed?
- ☐ What level of sophistication is best for NPS/PCA?
- ☐ For what type of users?
- ☐ Do those tools exist now?
- ☐ Would you want to add “plug-ins”?
- ☐ What is the status of the PCA tools for fragmentation analysis, productivity, etc?